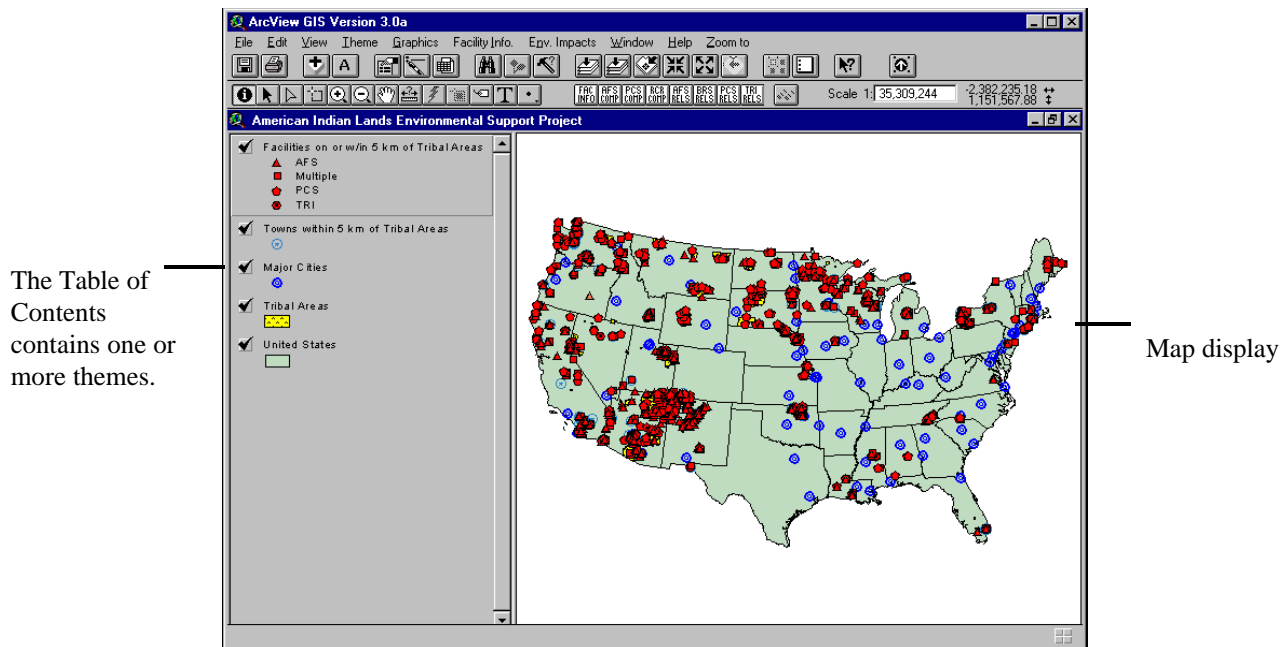


Chapter 4

Using AILESP Version 2.1

AILESP Version 2.1 was developed using ArcView. This chapter deals exclusively with the ArcView View document type and features that relate to it. A *view* is the map display window in ArcView and can contain a collection of geographic information called themes. A *theme* is a set of geographic features with similar characteristics (e.g. highways, fish consumption advisories, cities etc.).

While a view displays themes, it does not contain the geographic data files themselves. Since the themes in the view only reference these source data files, the view reflects the current status of the source data. If the source data changes, a view that uses these data automatically reflects the change when the view redraws.



A view document contains a map display area and a Table of Contents. The Table of Contents displays themes that are drawn in the map display area of the view. The view allows the user to manage how the various themes are classified and symbolized in the theme's legend.

ArcView lists and manages View documents (and all other ArcView documents) from the Project window. To work with views, select the Views icon in the Project window.

4.1 WORKING WITH THEMES IN A VIEW WINDOW

There are two general categories of operations that can be performed in a view document: view-specific and theme-specific. View-specific operations apply to all the themes in a view while theme specific operations apply only to the active theme. An asterisk (*) following an operation's name indicates that the operation can be performed via one of the buttons or tools on the toolbar. Other operations may be performed by selecting options from the menu bar or interacting directly with the Table of Contents.

4.1.1 View-specific Operations

Panning & zooming:* Use the Pan and Zoom tools and buttons to change the size and position of the map display. Panning repositions the focus of display without changing its scale. Zooming in (or out) increases (or decreases) the scale of the display as it focuses on different areas.

Measuring distance:* The Measure tool reports the accumulated distance between points that are clicked in the view.

4.1.2 Theme-specific Operations

Identifying features:* The Identify tool displays the attributes of a specific feature in the theme by clicking on it.

Selecting features:* The Select Feature tool selects a single feature in the theme by clicking on the feature. Using this tool you may also select many features at once by clicking and dragging a rectangular area around the desired features. Certain operations can then be performed on selected features.

Making themes active: Clicking on a theme's name in the Table of Contents makes it active. When a theme is active it appears raised off the Table of Contents, and is available for theme-specific operations. Multiple themes can be made active by holding down the shift key while clicking.

Turning themes on and off: Clicking the check box next to a theme in the Table of Contents toggles the theme on and off. When a theme is on, its features are drawn in the view. If a theme is turned off, then the theme features are not drawn in the view. This is for display purposes only and is not the same as adding and deleting themes. Some themes only draw at certain scales. When a theme will not draw at the current scale, its legend symbols are “hidden.”

Changing display order: ArcView draws themes sequentially starting with the theme at the bottom of the table of contents. Each successively higher theme is drawn on top of the last. To change the drawing order of a theme, hold the mouse button over the theme in the table of contents and drag the theme up or down to a new position in the list.

Editing Legends: To edit the legend of a theme, make a theme active and then select “Edit Legend” from the Theme menu. Alternately you may click the Legend Editor button on the toolbar, or double click on the theme's name to open the Legend Editor screen. From here you may choose a different legend for your theme.

Deleting themes: To delete a theme, make it active and select “Delete Themes” from the Edit menu.

Editing themes: Only themes that have ArcView shape files as their data source can be edited. To edit a shape file-based theme, make it active and select “Start Editing” from the Theme menu. Search Help for “editing a theme” for further information on native ArcView tools for editing themes.

Note that there are other buttons, tools, and menu choices that interact with views and offer more sophisticated ways of accomplishing some of the basic operations described here. Additional functions not fully described in this document are also available. Remember, for a brief description of the purpose of a button or tool, just move your cursor over it (without clicking) and read the status bar. Also see the *Using Help* section in *Chapter 2, Getting Started*.

4.2 USING AILESP VERSION 2.1



AILESP v.2.1 is a customized ArcView Project. When you open AILESP v.2.1 in ArcView, it displays the lower 48 contiguous states, major cities, and Tribal areas. The Table of Contents is on the left-hand side of the view window. The Table of Contents contains many *themes*. Themes are map details such as tribal areas, mines, and cities.







The Table of Contents shows the symbols used to draw the features in each theme. The check box next to each theme indicates whether it is currently displayed on the map. If a theme is “on” then it is drawn in the map.

The order in which themes are listed in the Table of Contents is important. The themes at the top of the Table of Contents are drawn over the themes that are listed below. The themes that appear at the bottom of the Table of Contents should include background features, such as water bodies and other polygon features. Line and Point features, such as Fish Consumption Advisories and facilities, should be drawn last. To change the order in which themes are drawn, you may drag the theme up or down in the Table of Contents.

4.2.1 Zooming In

In order to view the greatest amount of detail, your map must be at the proper scale. Many themes in your Table of Contents are scale dependent; that is, they are drawn only when the map is zoomed to a sufficient scale to allow for greater detail.


1. AILESP v.2.1 comes equipped with a customized Zoom To menu that zooms directly to the desired EPA Region. Select an EPA region from the Zoom To menu at the top right hand side of the View window. The View window displays the states of that region in the center of the map display.
2. To zoom in to a specific area, click the Zoom In tool  on your toolbar. Use your cursor to select an area; drag your cursor across the area you wish to enlarge while holding the left mouse button. A box appears around the area you select.
3. Release the left mouse button and the area that you selected is enlarged. Continue to zoom in more closely on the area you wish to view. Spatial data fills in as your map scale increases.
4. If you have zoomed to the proper scale, but wish to shift your view right, left, up or down, use the Pan tool. Click the Pan tool  on the toolbar, move your cursor anywhere over the view, hold down your left mouse button and drag the view in any direction. Release the mouse button to leave the view in your desired position.

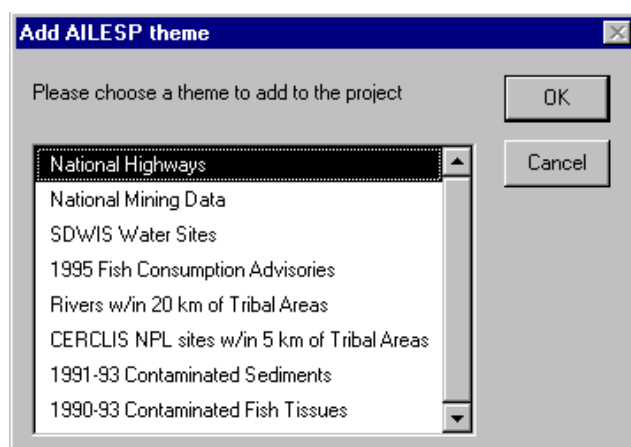
5. To zoom out, you may use the Zoom Out tool  on your toolbar. If you wish to “undo” your last zoom (in or out), use the Zoom to Previous Extent button  on your button bar.
6. To zoom in and out by a predetermined factor (2.1), use the Zoom In button  and the Zoom Out  button.
7. If you wish to view all of the features in a certain theme, first make the theme active by clicking on the theme title in the Table of Contents. Next, click the Zoom to Active Theme button  on the button bar. You map zooms to an extent that allows you to view all of the features in the active theme.
8. To display the full extent of your map, click the Zoom to Full Extent button  on the button bar.

Details begin to fill in as you zoom closer. If there is a theme you do not wish to view on your map, you may turn it off by clicking in the check box beside the theme to remove the check mark. Turning off unwanted themes can speed your computer’s processing time.

4.2.2 Adding a Theme

You can add details to your map by adding themes to your table of contents. In AILESP v.2.1, the Add AILESP Themes button contains a list of pre-defined and pre-symbolized themes. Unlike the native ArcView Add Theme button, you do not have to have any knowledge of the location or structure of the data.

1. To add a theme to your map, click the Add AILESP Themes button  on your button bar. The Add AILESP Theme screen appears.



2. Highlight the theme you would like to add and click [OK] (you may also double click on the theme to select it). The new theme appears in the Table of Contents.

Note: If you did not download the data layer referenced by the theme you wish to add, an error message appears. For instance, you must have downloaded *nhpn.exe* to be able to add the National Highways theme.

4.2.3 Cutting, Copying, Pasting, and Deleting Themes


You may cut, copy, paste and delete themes from your view document. Deleting unnecessary themes decreases wait time as your map redraws.

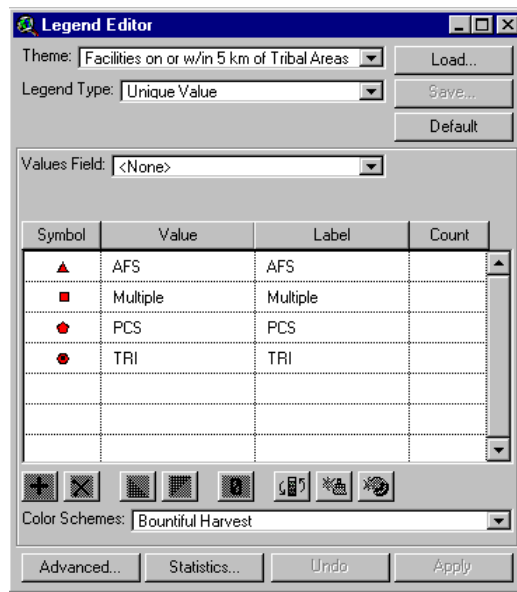
1. To cut or copy a theme from your view document, highlight the theme you wish to cut or copy. Select “Cut Themes” or “Copy Themes” from the Edit menu.
2. To paste a theme into a view document, cut or copy a theme from an existing view document.

3. Open a new or existing view document. If you are in a view document and wish to open a new document, select “AILESP.apr” from the Window menu. The AILESP.apr project screen is made active. Highlight “Views” and click [New] or select the view document you wish to open and click [Open].
4. Once you are in the View where you want to paste the theme, select “Paste” from the edit menu. To turn the new theme “on,” click in the check box next to the theme name.
5. To delete a theme from a view, highlight the theme and select “Delete Themes” from the Edit menu.

4.2.4 Changing Symbolization

ArcView provides many symbolization options for each theme. Symbolization determines the way a theme is represented in the map.

1. To change the symbolization of a theme, double click on the theme. Alternatively, you may highlight the theme in the Table of Contents and select “Edit Legend” from the Theme menu, or click the Edit Legend button  on the button bar. The Legend Editor screen opens. In the Legend Editor screen you may select the legend type and the symbol type.




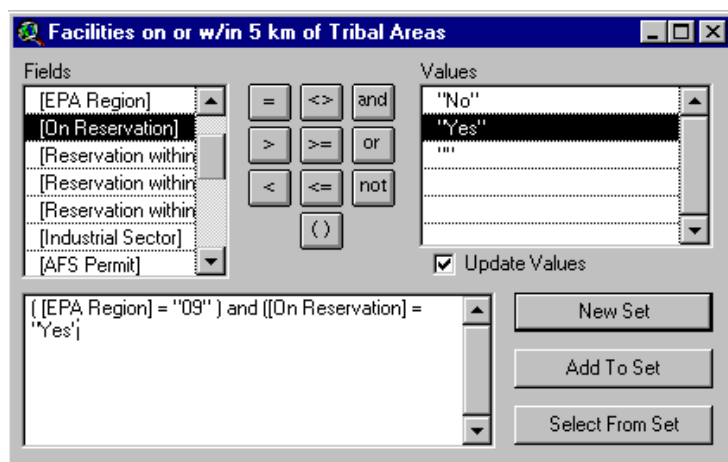
2. To select the symbol type double click the symbol; the Marker, Pen, or Fill Palette screen opens.
3. Choose a new symbol from the Pallete screen. Click [Apply] on the Legend Editor screen to apply the new symbol to your view.

4.2.5 Using the Query Builder

The Query Builder button allows you to select records within a table based on a set of criteria that you specify. You may specify criteria for any field within a theme. The Query Builder button may be used with any theme.

4.2.5.1 Creating a Query

1. To build a custom query with the Query Builder, you must first select a theme (to select a theme, click on the theme title in the Table of Contents). In our example, we selected the “Facilities on or within 5 km of Tribal Areas” theme.
2. Click the Query Builder button  on the button bar; a Query Builder screen opens that is specific to the theme that you selected.
3. To build your query, select a field, an operator, and a value. To select fields and values from the list boxes, double click on them. You may combine logic strings by using “and” and “or” operators. Query expressions are evaluated from left to right. In order to specify the criteria that should be considered first, use parentheses.



In our example, we have created a query to identify those Facilities on or within 5 km of Tribal Areas that are in Region 9 *and* are on a Reservation.

4. When you are satisfied with your criteria, click [New Set]. The facilities that matched the query criteria appear highlighted in the view.


4.2.5.2 Modifying the Selection

You may wish to continue refining your selection by adding records to the selected set or selecting records from the selected set.

Add Records to Selected Set


1. To add records to the selected set, delete the previous logic string in the Query Builder screen. If you closed the Query Builder screen, click the Query Builder button on the button bar.
2. Compose a new query using a field, an operator, and a value. When you are satisfied with your query, click [Add to Set]. The records that matched your previous query as well as those that match your current query are highlighted.

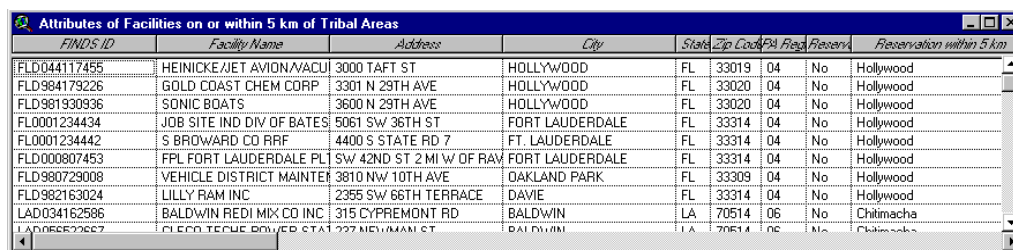
Select Records from Selected Set

3. To select records from the previously selected set, delete the previous logic string in the Query Builder screen. If you closed the Query Builder screen, click the Query Builder button on the button bar.
4. Compose a new query using a field, an operator, and a value. When you are satisfied with your query, click [Select from Set]. Only those records that were in your previous set *and* that matched your current query are highlighted.
5. To deselect the highlighted features on your map, make sure the applicable theme is active in the Table of Contents and click the Clear Selected Features button  on the button bar.





4.2.6 Displaying Selected Features Using Tables

You may view the attributes of the features selected in your view using tables. You may select features by running a query using the Query Builder, or by using the Select Features tool. Tables contain the attributes of all the features in any one theme.

1. To view the records of the features selected in your view, click the Open Theme Table button  on your button bar; this opens the attributes table of the active theme. The records that are selected in the view are highlighted in yellow in the table.




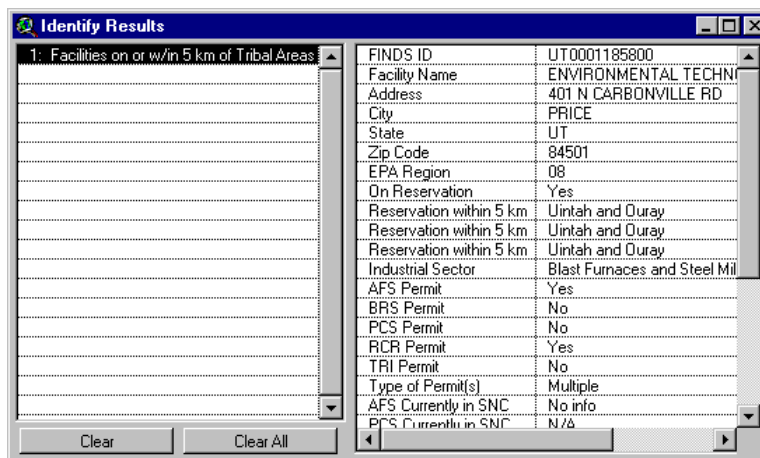
FINDS ID	Facility Name	Address	City	State	Zip Code	Pl	Reg	Reserv	Reservation within 5 km
FLD0044117455	HEINICKE/JET AVION/VACU	3000 TAFT ST	HOLLYWOOD	FL	33019	04	No		Hollywood
FLD984179226	GOLD COAST CHEM CORP	3301 N 29TH AVE	HOLLYWOOD	FL	33020	04	No		Hollywood
FLD981930936	SONIC BOATS	3600 N 29TH AVE	HOLLYWOOD	FL	33020	04	No		Hollywood
FL0001234434	JOB SITE IND DIV OF BATES	5061 SW 36TH ST	FORT LAUDERDALE	FL	33314	04	No		Hollywood
FL0001234442	S BROWARD CO RRF	4400 S STATE RD 7	FT. LAUDERDALE	FL	33314	04	No		Hollywood
FLD000807453	FPL FORT LAUDERDALE PL	SW 42ND ST 2 MI W OF RAV	FORT LAUDERDALE	FL	33314	04	No		Hollywood
FLD980729008	VEHICLE DISTRICT MAINTEN	3810 NW 10TH AVE	OAKLAND PARK	FL	33309	04	No		Hollywood
FLD982163024	ULLY RAM INC	2355 SW 66TH TERRACE	DAVIE	FL	33314	04	No		Hollywood
LAD034162586	BALDWIN REDI MIX CO INC	315 CYPREMONT RD	BALDWIN	LA	70514	06	No		Chitimacha
LAD000700027	PLECO TECQUE DRIVE STAT	777 NEWMAN CT	DAI PLUM	LA	70514	06	No		Chitimacha

2. Click the Promote button  on the Table button bar in order to display all selected records at the top of the table.
3. To sort records in a table, first click on the column header by which you would like to sort. Then click the Sort Ascending button  or the Sort Descending button  on the button bar. The records are sorted in order by the column header you selected.
4. To return to your View document, close the Attribute table using the control box or click in the View window to make it active.
5. Conversely, you may use tables to select features in the view: In the view document, highlight a theme in the Table of Contents. Click the Open Theme Table button; the theme attribute table opens. Highlight one or more records in the attribute table. Return to the view document and click the Zoom to Selected button  on the button bar. You may also select "Zoom to Selected" from the View menu. The features you selected in the attribute table are highlighted in the view.

4.2.7 Identifying Features

Using the Identify tool, users may view individual database records for points located on the map such as Tribal Areas. Unlike tables, the Identify tool only allows you to view one record at a time.

1. Zoom to the desired area using the zoom toolbar buttons or the Zoom To menu.
2. To display information on a specific feature, highlight a theme in the Table of Contents and click the Identify tool  on the toolbar.
3. Use your cursor to click on the feature in the active theme (make sure the cross hairs are directly over the item you wish to select). The Identify Results screen opens displaying detailed information about the feature that you selected.



The screenshot shows the 'Identify Results' window. On the left, a list box contains the theme '1: Facilities on or w/in 5 km of Tribal Areas'. The main area displays a table of attributes for a selected feature.

FINDS ID	UT0001185800
Facility Name	ENVIRONMENTAL TECHN
Address	401 N CARBONVILLE RD
City	PRICE
State	UT
Zip Code	84501
EPA Region	08
On Reservation	Yes
Reservation within 5 km	Uintah and Ouray
Reservation within 5 km	Uintah and Ouray
Reservation within 5 km	Uintah and Ouray
Industrial Sector	Blast Furnaces and Steel Mil
AFS Permit	Yes
BRS Permit	No
PCS Permit	No
RCR Permit	Yes
TRI Permit	No
Type of Permit(s)	Multiple
AFS Currently in SNC	No info
PCS Currently in SNC	N/A

At the bottom of the window are 'Clear' and 'Clear All' buttons.

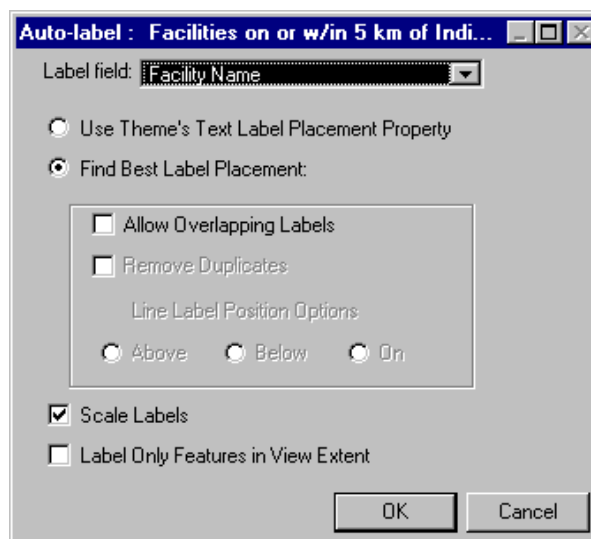
4. To close the Identify Results screen use the control box.

4.2.8 Labeling Your Map

There are many ways to label your map; you may choose to label everything in a certain theme, for instance, label each facility in the Facilities within 5 km of Tribal Areas theme, label only selected features, or label individual elements on your map. Before labeling your map, make sure that your view is zoomed to a proper extent.

4.2.8.1 Labeling A Theme


1. To label a theme, select the theme. (To select a theme, click on the name of the theme in the Table of Contents.)
2. Select “Auto-label” from the Theme menu. The Auto-label screen opens. In the Auto-label screen you may specify your labeling options.




3. Click [OK] if you are satisfied with your choices. Each element that is included in the active theme appears labeled on your map. If you did not select “Allow Overlapping labels” in the Auto-label screen, then those labels that would have overlapped do not appear.

4.2.8.2 Labeling Selected Features




1. To label selected features, select a theme. (To select a theme, click on the name of the theme in the Table of Contents.)

2. Next, click the Select Features tool  on the toolbar. Use your cursor to select individual features or a group of features. To select a group of features, drag your cursor across the area you wish to select while holding the left mouse button. Release your mouse button and the features of the active theme that were included in the selected area appear highlighted. (Features in your map may also be selected via the query builder or by highlighting them in the theme attribute table.)
3. Select Auto-label from the Theme menu. Each feature that is selected now appears labeled on your map.

4.2.8.3 Labeling Individual Elements


1. To label individual elements on your map, click the Label tool . Use your cursor to click on elements in your map that you wish to label.

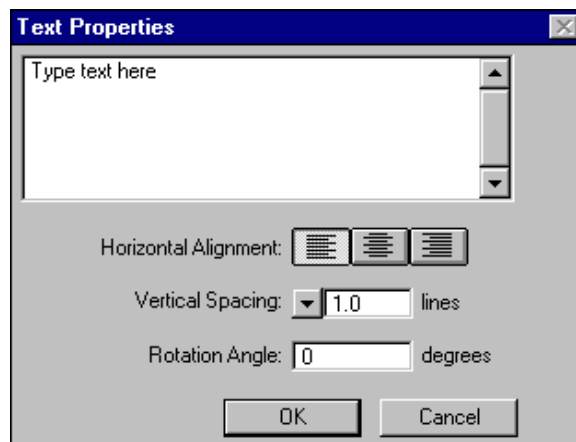
4.2.8.4 Moving, Sizing, and Deleting Labels


1. To move a label, click the Pointer tool  on the toolbar. Use your cursor to click the label you want to move. Four handles appear around the label. Now you may use your cursor to drag the label anywhere you like.
2. If you wish to resize a label, click the label with the Pointer tool. Drag the label's handles until it is the size you wish.
3. To deselect the label, click anywhere on the map with the Pointer tool  where there is no other label or graphic selected.
4. To delete all labels from your map, select "Remove Labels" from the Theme menu. If you wish to delete individual labels from you map, select the Pointer tool  and use your cursor to click the label you wish delete. When the label is selected (with handles appearing around the label), press the [Delete] key on your keyboard.

4.2.9 Adding Text

For various purposes (e.g. titles, annotation, labels) you may wish to add a short descriptive text string to the view.


1. To add text to your view, click the Text tool  on the toolbar.
2. Use your cursor to click on the desired location for the text in the View display area. This opens the Text Properties screen.



3. Type your text in the text box. Specify your horizontal alignment, vertical spacing, and rotation angle. Click [OK] when you are finished.
4. Use the Pointer tool  to drag the text to the desired location.
5. To edit the text, double click on the text with the Pointer tool. The Text Properties screen opens and allows you to edit the text string.
6. To change the text font, click on the text you wish to edit with the Pointer tool so that four handles appear around the text. Select “Show Symbol Window” from the Window menu, or press the [Ctrl] key and [P] at the same time to open the Fill Palette screen. Click the [ABC] button in the Fill Palette screen; the Font Palette screen opens. In this screen you may specify the font properties as you desire.

4.2.10 Finding Features in Your Map

If you are searching for a specific facility in your map, you may wish to use the Find button. With the Find button you may type in the name of the feature you are looking for and it will appear highlighted on your map. Find will not search numeric fields.

1. To find a specific feature, first highlight a theme by clicking on it in the Table of Contents.
2. Click the Find button  on the button bar; the Find screen opens.

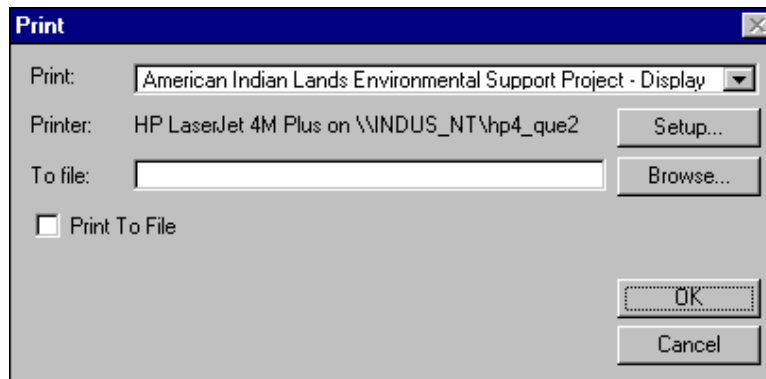


3. Type in the name of the feature you wish to find. Do not use parentheses or wildcard characters as Find does not recognize these characters. Find is not case sensitive. You may type in part of the text, for example to search for Nebraska you may type “nebr”.
4. Click [OK] when you have typed in the text string you wish to find. Find locates the first attribute that matches your criteria. ArcView highlights the feature and pans the view so that the feature is in the center of the view.

4.2.11 Printing the Map Display (No Formatting)

You may choose to print your map from the View window. If you print directly from the View menu your map will be unformatted. To format your map you may click the Print Setup button on the toolbar. Clicking the Print Setup button allows you to select the layout of your map. For more information on printing map layouts, see *Chapter 6, Printing Layouts*.

1. To print exactly what is displayed in the View window, select “Print” from the File menu; the Print screen opens. The system default printer will be listed in the Print field.



2. To change your printer selection, your paper orientation (landscape or portrait) and paper size, click the [Setup] button in the Print screen. The Print Setup screen opens. When you are satisfied with your setup options click [OK] to return to the Print screen.
3. Click [OK] in the Print screen to begin printing a hard copy map with no formatting. Your map is printed with a standard 60 color ArcView palette.